



USAID PREDICT-2

BEHAVIORAL RISK DISCUSSION DOCUMENT
WORKPLAN HIGHLIGHTS



1



CONTENTS

- Behavioral Risk Mitigation Workplan Highlights
- Data Collection, Analysis, and Recommendations
- Spotlight: Bats



WORK PLAN HIGHLIGHTS

BEHAVIORAL RISK MITIGATION



3



AIMS OF OBJECTIVE 2: BEHAVIORAL RISK CHARACTERIZATION

■ Behavioral Risk Characterization Aims¹

- To characterize contact among people, livestock, and potential wildlife reservoirs
- To investigate the correlations between human behavior and zoonotic disease risk
- To understand the behavioral mechanisms of high-risk pathways for disease emergence and spread
- To identify potential control points and behavior change options
- To field pilot strategies to evaluate behavior change interventions that can be taken to scale

¹ Source: RFA



ACTIVITIES OF OBJECTIVE 2: BEHAVIORAL RISK CHARACTERIZATION

- **Promoting policies and practices that reduce the risk of virus evolution, spillover, amplification, and spread¹**
 - Under AI and EPT-1 it became increasingly clear that efforts to promote **individual** behaviors that were intended to lower infection to “rare” disease threats were highly **ineffective**.
 - At the core of the dilemma was the common and accurate perception that the risks posed by potentially new infectious diseases were very **unlikely to affect any one individual**. As such, there was little to no motivation for individuals to adopt new behaviors.
 - On the other hand, it became increasingly clear that mitigating the risk posed by new infectious diseases could be more effectively addressed by focusing on **policies and regulations** that can affect the **population-based behaviors and practices** that contribute to viral evolution, spill-over, amplification and spread.
 - Under EPT-2 there will be particular focus on promoting policies and regulations that can impact on **industrial and/or community scale practices** that directly or indirectly contribute to “spill-over, amplification and spread” of new infectious diseases. EPT-2 will not focus on individual behavioral change and/or communications work.

¹ Source: RFA



ACTIVITIES OF OBJECTIVE 2: BEHAVIORAL RISK CHARACTERIZATION

■ **Activity 2.1. Standardizing approaches to study human behavioral risk¹**

- Identify and monitor behaviors, attitudes, practices, and socio-cultural **norms** and conditions that facilitate animal-human and animal-animal **contact** and influence the spillover, amplification, and spread of zoonotic pathogens.
 - Sub-activity 2.1.1. *Developing frameworks and standardizing approaches for behavioral risk data collection to understand human-animal interactions and their associated meaning and rationale*
 - Sub-activity 2.1.2. Conducting semi-structured, targeted **ethnographic** assessments in natural settings at prioritized biological and ecological surveillance sites to characterize behavioral risk along high-risk **pathways** for disease emergence and spread

■ **Activity 2.2. Identifying potential intervention points¹**

- Develop and measure indicators and **integrate data** from biological surveillance, behavioral risk characterization, and economic and anthropologic studies to identify **potential targets for intervention** to reduce the risk of viral amplification and spread
 - Sub-activity 2.2.1. **Combine data** collected from human behavioral questionnaire with biological and ecological surveillance data; develop and measure **key indicators** of high-risk contact among demographic groups to identify high-risk subpopulations and determine **relationships** between high-risk contact indicators and biological, ecological, and socio-behavioral data
 - Sub-activity 2.2.2. Target specific **high-risk contact behaviors** commonly reported and associated with increased risk for further in-depth study and to **advise** on suitable **intervention** approaches.

¹ Source: Global Workplan



DATA COLLECTION, ANALYSIS, AND RECOMMENDATIONS

BEHAVIORAL RISK MITIGATION



7



LARGE - SCALE BEHAVIOR CHANGE

- Provide 1 or 2 recommendations for policies and/or regulations that can affect the population-based behaviors and practices that contribute to viral evolution, spillover, amplification, and spread
- Focus will be on promoting policies and regulations that can impact industrial and/or community scale practices that directly or indirectly contribute to the spillover, amplification, and spread of new infectious diseases



SPOTLIGHT: BATS

BEHAVIORAL RISK MITIGATION



9



BEHAVIORAL RISK AND MITIGATION SPOTLIGHT: BATS

■ Rationale

- Many damaging infectious disease pandemics have been caused by zoonoses (diseases transmitted between animals and humans)
 - "At least 61% of all human pathogens are zoonotic, and have represented 75% of all emerging pathogens during the past decade" – WHO, 2017
- This includes SARS and Ebola
- Both SARS and Ebola have been linked to contact with bats
- Risk mitigation through behavior change interventions can play a significant role in prevention
 - Behavior change interventions could reduce the 'evolution, spillover, amplification, and spread' of zoonotic viruses with pandemic potential, both in the short term and in the long term

¹ Source: WHO 2017



BEHAVIORAL RISK AND MITIGATION SPOTLIGHT: BATS

Examples of how qualitative findings can be leveraged for behavior change intervention messaging

Country (examples)	Results from Our Behavioral Risk Work ¹	Behavior Change: Core Message
China	<ul style="list-style-type: none">• Respondents from Luding and Shantou said bats in the house are often found to be useful because they eat mosquitoes• While having bats nearby could lead to increased contact, the concept can be converted into positive messaging reinforcing why it is good to avoid killing them, in conjunction with recommended procedures for safe handling [resource: EIDITH protocols]	<ul style="list-style-type: none">• Don't kill bats
China	<ul style="list-style-type: none">• Eating bats does not cure night sweats or nocturia (a: quotes on slide 16)<ul style="list-style-type: none">◦ Alternatives cures for night sweats include ... [locally-available alternatives]◦ Alternative cures for nocturia include ... [locally-available alternatives]	<ul style="list-style-type: none">• Don't eat bats
DRC	<ul style="list-style-type: none">• Many no longer eat bats because they follow the practices of their ancestors, who stopped eating bats (Inongo Nkoye custom) (b: quotes on slide 17)	
Global Source: PREDICT	Alternative sources of protein include farmed wildlife from accredited commercial producers and producers of domestic animals	
Cameroon	<ul style="list-style-type: none">• Using excrement for fertilizer can spread disease (c: quotes on slide 18)	<ul style="list-style-type: none">• Avoid contact with bat secretions, organs, or body fluids of living or dead bats
Malaysia	<ul style="list-style-type: none">• Pig farms can be distanced from fruit tree production sites to distance pigs from bat excrement	<ul style="list-style-type: none">• Distance bats from swine and other mammals
Indonesia	<ul style="list-style-type: none">• For more serious injuries (such as bites, scratches or if cut while butchering), certified medical professionals have medical treatments that traditional healers may not have access to (d: quotes on slide 19); public health workers can work more collaboratively with	<ul style="list-style-type: none">• If scratched or bitten, or if you cut yourself while butchering, seek care from a certified medical professional

BEHAVIORAL RISK AND MITIGATION CASE EXAMPLE: BATS

(a): Quotes from China

Belief that bats can be used to treat night sweats among children and nocturia (frequent urination at night)

Interviewer: Are there many people here liking eating bats?
Person I: Yes, but not many. Some children have night sweat. Bats are bought for medication.
Interviewer: Does it work?
Person I: Yes.
– Adult Male | Hunter/Trapper (rodents) | Luoding China | 2016

Interviewer: Does anyone catch bats here?
Person I: No. It's no good catching bats. They're friends of people. They fly into houses to prey insects at times.
Interviewer: They eat mosquitoes.
Person I: Yes, they live on mosquitoes and other insects. It's no good catching bats.
Interviewer: But people in other towns say eating bats cures nocturia or what?
Person I: Yes, curing nocturia, nourishing body fluid and so on. These bats are too small to be killed. Even those in caves on mountains are probably only one kilogram. They're just this big stretching their wings.
– Adult Male | Hunter/Trapper (Voles) | Luoding China | 2016

Trapping only when requested to do so by someone seeking to treat something like night sweats

Interviewer: Did you catch bats?
Person I: Yes.
Interviewer: Is bat demand great or not?
Person I: Not great. Since the demand isn't great, we didn't catch now.
Interviewer: They are seldom bought now.
Person I: Somebody may need bats to treat their child's night sweat since bats have the effect of nourishing yin. They want a couple of bats and then we catch by the way.
– Adult Male | Hunter/Trapper (rodents, small mammals, snakes, insects) | Luoding China | 2016

BEHAVIORAL RISK AND MITIGATION

CASE EXAMPLE: BATS

(b): Quotes from DRC

Following the practices of ancestors

Erby: Do you also eat bats?

Hunter I: They eat them. We have strangers who live over there who eat them.

Erby: And so you?

Hunter I: No, I don't eat it.

Erby: Why?

Hunter I: I don't eat it because our ancestors didn't eat it anymore.

Erby: Hmm.

Hunter I: Everything that we eat we do according to what our ancestors did. We follow our customs. If our ancestors ate something, we also eat it.

– Adult Male | Hunter/Trapper (Voles) | Inongo, DRC | 2015

BEHAVIORAL RISK AND MITIGATION

CASE EXAMPLE: BATS

(c): Quotes from Cameroon

Bats are used for excrement by professional gardeners

Interviewer: about bats, you have other stories with bats or other such affairs?

Person 5: uses for bats?

Interviewer: That's to say, like, for example, their excrement?

Person 5: Of what I know, there are some that use it pour the garden, like a fertilizer

Interviewer: But here, do you in the gardens, use their droppings?

All: No

Person 5: its only gardeners

Interviewer: Some gardeners use it?

Person 5: yes

– Focus Group with Adult Females | Representatives from the Congolese Industrial Society | Lukula, DRC | 2015



BEHAVIORAL RISK AND MITIGATION

CASE EXAMPLE: BATS

(d): Quotes from Indonesia

After being bitten by bats, medical care is not always sought from a certified medical professional

Interviewer: Do you feel hot in the area that rat bites you?

Respondent: No, I used to be bitten by rats. I just have fever which that is normally happened when got bitten by the rats or bats. I did not visit doctor only using the leaves and grass here surround the field and forest.

– Adult Male (hunter) | North Sulawesi, Indonesia | 2015



THANK YOU

Q & A